AN OVERVIEW OF THE DEVELOPMENT OF REPOSITORIES AND OPEN ACCESS IN MEXICO

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The paper presents an overview of the current landscape of repositories in Mexico and focuses on the work being done at the Universidad Nacional Autónoma de México (UNAM). Finally, we offer specific recommendations for the further development of repositories and Open Access, with particular focus on the needs and possibilities of developing countries.

Repositories have become increasingly important in the academic world (Crow 2002; Lynch 2003; Kircz 2005). However, global coverage is patchy, with a small number of countries leading the way with the majority of their academic organizations developing institutional repositories, plus a number of subject or national repositories (Lynch and Lippincott 2005; Westrienen van and Lynch 2005; Markey, St Jean et al. 2006) Other countries will have none or only a few.

Although the importance for developing countries of Open Access and repositories has been previously noted (Arunachalam 2003; Chan, Kirsop et al. 2005; Chan, Kirsop et al. 2005) more work is required on the current situation (Fernandez 2006). The object of this paper is to focus on Mexico, and to give an overview of its development and the current challenges, by reviewing the Mexican repositories registered in OpenDOAR and ROAR and following this up with a case study of the repository situation at the UNAM.

Methodology

Ten Mexican repositories were identified. This is quite a small number considering the size and academic importance of the country. Repositories were reviewed and classified using a typological model (Heery and Anderson 2005). This was followed by a case study of 3R, a repository development project at the UNAM, the national university that produces over 50% of the country's research. This included interviews with two UNAM based repository managers. The results of these interviews were compared to similar ones with repository managers in the UK to highlight points of convergence and differences.

Results

Despite there being only ten Mexican repositories, a large range of types were found: theses, national subject, institutional and regional repositories. Most, but not all, are still in the embryonic stage and there appears to be no identifiable trends in their development. Three repositories were over five years old, two were undisclosed and three had been registered in ROAR in the past two or three years but it was unclear how long they had been under development. There was no evident relationship between age and number of items. Two had less than 100 items, two between 1000 and 5000, whilst the other two were very large. One repository had over 120,000 items but on closer inspection, it was seen to be functioning as a library catalogue rather than a repository. The second had almost 80,000 apparently full-text article journals. Four repository sizes were unknown as they had not been successfully harvested.

Case study

In order to examine the particular instances of repository development in Mexico, a case study was selected, 3R at the UNAM. The project is particularly well documented (Lopéz, Castro et al. 2006) and the author involved, providing vital access to additional information, experiences and interviews. 3R began in 2005 as part of a larger university funded programme, designed to encourage interdisciplinary research within the University.

Initial steps undertaken were to diagnose the current state of repository development or digital collections at the UNAM. The UNAM has a particularly impressive web presence, appearing at number 59 in the World's Universities' Ranking on the Web[1]. We did not find a repository in a strictly defined sense or with OAI-PMH interoperability. However, a number of digital collections covering a large range of material both in type and subject were found. These were organized in such a fashion that they could easily be repurposed as repositories. It was clear from this work that repositories could answer an obvious need for digital object management and distribution. We found little or no evidence of coordination between the different working groups involved.

An extensive revision of repository literature made it clear that the most difficult aspects in repository development are workflow processes, policies and content ingestion, rather than technical ones where several software solutions are available. We set up four prototype repositories in order to work on the technological aspects, but more importantly on policies, content and workflow processes. Workshops were organized to bring together different potential repository managers and arrive at basic global policies and to work out local and specific repository policies depending on local needs and requirements.

These workshops were also targeted at examining and understanding the breadth and volume of the digital materials that we could expect. Acquiring a critical mass of digital materials is an important consideration. It was decided that the four prototype repositories would serve as a benchmark before discussing mandates and other forms of acquiring content. We hope that this project can serve as a proof of concept before talking to higher university authorities.

[1] See http://www.webometrics.info/

Additionally it has become clear that repository strength lies in the services that can be built on top that make them more useful to academics. The Biology Institute university repository has done extensive work on this. One interesting example is connecting the OAI-PMH repository with articles to another repository that holds information about biological collections using Darwin Core metadata scheme. This type of linkage between OAI-PMH and Darwin Core has not been done before and could be a useful contribution to the field.

From the interviews, it was clear that the Mexican repositories are less developed in terms of institutional buy in, content acquisition and staffing. The Mexican repositories were still a recent development and worked on part time by a member of staff. UK repositories all had hired full time staff. However, in most cases this was a fairly recent development (within the last year). Mexican repositories were only just beginning to acquire content, although notably the IB is already working on added on services. A clear and important difference with Mexican repositories is that there is still no full recognition of their importance, either from university authorities or the national science council. This is a big difference from UK where especially JISC funded projects have been important motors for repository development.

Conclusions

There is a definite need for academic digital content management solutions within Mexican universities. There appears to be an important trend towards repository building in the country, although it is lagging behind in terms of development. However, the mature state of software development would allow Mexican universities to play catch up and innovate with added on services. The few repositories that do exist are mostly still in embryonic form or were developed as prototypes and then abandoned or discontinued.

One of the most important aspects to work towards is making university administrators and national policy makers more aware of the need to promote, fund and develop repositories. Although repositories are still not ubiquitous in all developed countries academic institutions, their importance is acknowledged and discussed at policy-making level. So although Mexico is a subscriber to the Open Access movement, real steps have to be taken towards its implementation.

It is also important to gather information from the more advanced repositories that exist in Mexico, together with work being done with 3R, to develop an important body of literature and experiences in Spanish. This would allow us to build a framework so that universities can work together to develop and promote repositories and bring this to the attention of a larger group of people, in particular university authorities, national policy makers and funding bodies.

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